ATTACHMENT A

FACILITY DESCRIPTION

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF ABBREVIATIONS/ACRONYMS

20.4.1 NMAC	New Mexico Administrative Code, Title 20, Chapter 4, Part 1
AASHTO	American Association of State Highway and Transportation Officials
CSU	container storage unit
JCI	Johnson Controls World Services, Inc.
LANL	Los Alamos National Laboratory
MLLW	mixed low-level waste
MTRUW	mixed transuranic waste
TA	technical area

ATTACHMENT A
FACILITY DESCRIPTION

The information provided in this attachment is submitted in accordance with the applicable requirements of the New Mexico Administrative Code, Title 20, Chapter 4, Part 1 (20.4.1 NMAC), revised June 14, 2000 [6-14-00]. The following subject areas are addressed in this attachment:

- A general description of Technical Area (TA) 54 at Los Alamos National Laboratory (LANL) [20.4.1 NMAC § 270.14(b)(1)];
- Site-specific traffic patterns, volume, and control [20.4.1 NMAC § 270.14(b)(10)];
- Site-specific location information for compliance with the seismic and floodplain standard requirements [20.4.1 NMAC § 270.14(b)(11), and 20.4.1 NMAC § 264.18(a) and (b)];
- Site-specific topographic map requirements [20.4.1 NMAC § 270.14(b)(19)];
- Site-specific groundwater monitoring and protection information [20.4.1 NMAC § 270.14(c), and 20.4.1 NMAC § 264.90(a)].

A LANL-wide facility description addressing additional regulatory requirements is provided in Appendix A in the most recent version of the "Los Alamos National Laboratory General Part B Permit Application," hereinafter referred to as the LANL General Part B.

A.1 TA-54 GENERAL DESCRIPTION [20.4.1 NMAC § 270.14(b)(1)]

TA-54 is located in the east-central portion of LANL (Figure A-1) on Mesita del Buey, an east-west-trending finger mesa bounded by Cañada del Buey to the north and by Pajarito Canyon to the south. Mesa-top elevations at TA-54 range from approximately 6,400 to 6,650 feet above mean sea level. TA-54 consists of several waste management areas, including Area L, Area G, and TA-54 West, and supporting offices.

The TA-54 hazardous and mixed waste management units addressed in this permit renewal application are located at Area L, Area G, and TA-54 West (Figure A-2).

At Area L, there are two container storage units (CSU) for storage of hazardous waste and/or mixed low-level waste (MLLW). They include the aboveground CSU within the fence and the Storage Shafts CSU (Shafts 36 and 37).

At Area G, there are nine CSUs for storage of hazardous waste, MLLW, and mixed transuranic waste (MTRUW). They include the following:

- Storage Domes 229, 230, 231, and 232, and Pad 9;
- TA-54-412, Storage Dome 226, and Pad 1;
- Storage Dome 48 and Pad 3;
- Pad 10 (former Pads 2 and 4) and the transuranic waste characterization facilities;
- Storage Domes 49 and 224; Storage Sheds 144, 145, 146, 177, 1027, 1028, 1030, and 1041; and Pads 5, 8, and 7;
- Storage Domes 153 and 283, and Pad 6;
- Storage Shed 8;
- TA-54-33, and;
- Storage Dome 375 and Pad 11.

At TA-54 West, there are two CSUs for storage of MLLW and MTRUW in solid form. They include the Indoor CSU and the Outdoor CSU at TA-54-38.

Descriptions of the Area L, Area G, and TA-54 West CSUs are provided in Section 2.0 and Attachment G of this permit renewal application. The locations of these CSUs are shown on Figures 2-1, 2-3, and 2-14 in Section 2.0.

A.2 TRAFFIC PATTERNS [20.4.1 NMAC § 270.14(b)(10)]

General traffic pattern information, traffic volumes, and traffic control signals for the LANL-wide facility are provided in Appendix A of the LANL General Part B.

A.2.1 Routes of Travel

The primary traffic routes used to transport hazardous and mixed waste to TA-54 include Pajarito Road, Diamond Drive, and West Jemez Road (State Road 501) (see Map 1 in the most recent version of the "Los Alamos National Laboratory General Part A Permit Application" [hereinafter referred to as the LANL General Part A]). Within TA-54, waste is transported along Mesita del Buey Road to TA-54 West, Area L, or Area G (Figure A-2).

A.2.2 Traffic Volumes

Traffic volumes on Mesita del Buey Road are generally light to moderate. A traffic study was conducted in 1993 at the intersection of Pajarito Road and Rex Drive, which immediately joins Mesita del Buey Road. Based on this study, the Pajarito Road and Rex Drive intersection had a volume of 380 vehicles turning off of Pajarito Road between 6:30 and 9:00 in the morning (Johnson

Controls World Services, Inc. [JCI], 1993). Vehicle types are generally cars, light- and medium-duty trucks, and vans. Flatbed trucks or trailers also use Mesita del Buey Road to transport waste containers.

A.2.3 Traffic Control Signals

Traffic control signals within TA-54 include stop signs, posted speed limits, caution lights, and other traffic and pedestrian control signs. The locations of existing signs at TA-54 are shown on Figure A-3.

A.2.4 Road Surfacing and Load-Bearing Capacity

Roads within TA-54 are generally two-lane roads with asphaltic-concrete surfaces. Load-bearing capacity for these roads is 32,000 pounds per axle. These roads are typically constructed with a 6-inch-thick base overlain with a 3-inch-thick asphaltic-concrete surface. These roads were designed and constructed to meet the American Association of State Highway and Transportation Officials (AASHTO) specification HS-20 (AASHTO, 1996). In TA-54, Area G, road surfaces consist of asphaltic-concrete, graded gravel, and/or dirt.

A.3 LOCATION INFORMATION [20.4.1 NMAC § 270.14(b)(11)]

A.3.1 Seismic Standard [20.4.1 NMAC § 270.14(b)(11)(i and ii) and 20.4.1 NMAC § 264.18(a)]

The hazardous and mixed waste management units at TA-54, Areas L and G, are exempt from the seismic standards in 20.4.1 NMAC § 270.14(b)(11), and 20.4.1 NMAC § 264.18(a) [6-14-00], because these units or the interim status storage capacity existed prior to January 25, 1985, and July 25, 1990, when the State of New Mexico received hazardous and mixed waste authorization, respectively. The mixed waste management units at TA-54 West are exempt from the seismic standards in 20.4.1 NMAC § 270.14(b)(11), and 20.4.1 NMAC § 264.18(a) [6-14-00], because this unit existed prior to July 25, 1990 when the State of New Mexico received mixed waste authorization. Consistent with the criteria provided in 20.4.1 NMAC § 270.14(b)(11)(i), and 20.4.1 NMAC § 264.18(a) [6-14-00], the waste management units at TA-54 existed prior to the effective date of regulations or were approved under interim status; thus, the seismic standards are not applicable.

A.3.2 Floodplain Standard [20.4.1 NMAC §§ 270.14(b)(11)(iii through v) and 270.14(b)(19)(ii); 20.4.1 NMAC § 264.18(b)]

The hazardous and mixed waste management units at TA-54 are located on a mesa top, Mesita del Buey. In accordance with 20.4.1 NMAC § 270.14(b)(11)(iii through v) [6-14-00], the hazardous and mixed waste management units at TA-54 are not located within the 100-year floodplain boundary. Additional floodplain information is provided in Appendix A of the LANL General Part B.

A.4 TOPOGRAPHIC MAPS [20.4.1 NMAC § 270.14(b)(19)]

Topographic maps and figures are provided herein or referenced to meet the requirements of 20.4.1 NMAC § 270.14(b)(19) [6-14-00]. The maps clearly show the map scale, the date of preparation, and a north arrow. The maps and figures used to fulfill these regulatory requirements include the following:

- LANL-wide 100-year floodplain maps were provided as Appendix C of the "Response to Request for Supplemental Information: Technical Adequacy Review, RCRA Permit Application; General Part A, April 1998, Revision 0.0; General Part B, October 1998, Revision 1.0; Los Alamos National Laboratory, EPA ID No. NM0890010515" (LANL, 2001).
- Maps showing surface waters, including intermittent streams, near TA-54 are included as Figures 2-1, 2-3, and 2-14 in Section 2.0 of this permit renewal application.
- Surrounding land uses are shown on Map 1 in the LANL General Part A.
- Wind roses for TA-54 are shown on Figures A-4 and A-5.
- A map showing the legal boundaries of LANL (including TA-54) is provided as Map A-2 in the LANL General Part B.
- Access control features at TA-54 (e.g., fences, gates) are shown on Figures 2-1, 2-3, and 2-14 in Section 2.0 of this permit renewal application.
- The locations of buildings, hazardous and/or mixed waste management units and structures, and loading and unloading areas at TA-54 are shown on Figures 2-1, 2-3, and 2-14 in Section 2.0 of this permit renewal application.
- A map showing National Pollutant Discharge Elimination System discharge structure locations is included in the LANL General Part A.
- Storm, sanitary, and process sewer systems at LANL are shown on Map A-1 of the LANL General Part B.

- Drainage control features (e.g., run-on/runoff, drainage barriers) are shown on Figures 2-1, 2-3, and 2-14 of this permit renewal application.

- Fire stations serving LANL and the County of Los Alamos are shown on Figure E-2 of Appendix E in the LANL General Part B.

- The equipment cleanup area for LANL is located at TA-50-1. The location of TA-50-1 is shown on Figure 50-1 in the LANL General Part A.

Contour lines on all topographic maps are in intervals sufficient to detail natural drainage at LANL and in the vicinity of the waste management units. As provided in 20.4.1 NMAC § 270.14(b)(19) [6-14-00], LANL has submitted the maps to the New Mexico Environment Department at these scales and contour intervals due to the size of the waste management units, the extent of the LANL facility, and the topographic relief in the area.

A.5 GROUNDWATER MONITORING [20.4.1 NMAC § 270.14(c) and 20.4.1 NMAC § 264.90(a)]

Groundwater monitoring information is provided in Appendix A of the LANL General Part B.

A.6 OTHER PERMIT ACTIVITIES

Other types of Resource Conservation and Recovery Act permits include, but are not limited to, the following;

- Permits by Rule
- Emergency Permits
- Hazardous Waste Incinerator Permits
- Permits for Land Treatment Demonstrations Using Field Test or Laboratory Analyses
- Interim Permits for Underground Injection Control Program Wells
- Research, Development, and Demonstration Permits
- Permits for Boilers and Industrial Furnaces Burning Hazardous Waste.

Currently, none of these permit types are relevant for operations at TA-54.

A.7 REFERENCES

AASHTO, 1996, "Standard Specifications for Highway Bridges," 16th Edition, American Association of State Highway and Transportation Officials.

JCI, 1993, "Conceptual Study Report for Entrances to TA-54 at Pajarito Road and Rex Drive, at New Intersection Between TA-51 and TA-54 West, and at TA-54, Area G, Dirt Road Connecting Pajarito Road to Waste Site on Top of Mesa," JCI 93-128, Johnson Controls World Services, Inc., Design Department, Los Alamos, New Mexico.

LANL, 2001, “Response to Request for Supplemental Information: Technical Adequacy Review, RCRA Permit Application: General Part A, April 1998, Revision 0.0; General Part B, October 1998, Revision 1.0; Los Alamos National Laboratory, EPA ID No. NM0890010515,” LA-UR-01-6054, Los Alamos National Laboratory, Los Alamos, New Mexico.